



AWARENESS AND ATTITUDE TOWARDS USE OF E-LEARNING RESOURCES AMONG HIGHER SECONDARY STUDENTS

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ABSTRACT

The objective of this study was to find out the level of awareness and attitude towards the use of e-learning resources in biology in higher secondary students, and to find out the correlation between awareness and attitude on the basis of Gender and Board of the students. In the present study, the investigator has used survey method. The tools used here for collection of data were 1) Awareness test on e-learning resources in biology (AOEB). and 2) attitude Scale on attitude towards use of e-learning resources in biology (ATEB). These tools were administered to 140 senior secondary biology students of Patna, Bihar. The sample was taken by purposive sampling. Students were randomly selected from 4 senior secondary schools two each affiliated to CBSE board and rest two was of ICSE board schools. For the analysis of data, the investigator has used percentage analysis, 't' test and Pearson Product Moment correlation analysis.

The finding of the study reveals that 1) There is no significant difference between awareness of students towards use of e-learning resources in biology based on their gender. 2) There is no significant difference between awareness of CBSE and ICSE students towards use of e-learning resources in biology based on their boards of school. 3) there is no significant difference between attitude of male and female towards use e-learning resources in biology based on their gender. 4) There is significant difference between attitudes of students towards use of e-learning resources in biology based on their board of students 5) There is significant relationship between awareness and attitude towards the use of e-learning resources in biology in senior secondary school students. 6) There is no significant relationship between boys' awareness and attitude towards use of e-learning resources in biology.

KEY WORDS: E-learning, Attitude, Awareness etc.

INTRODUCTION:

Education is a never-ending. It starts with the birth of an individual and then it goes on till the last day of the individual. It plays an important role in molding the ideas, attitudes, interests, habits, and values of the children. Education enables a person to facilitate one's duties and responsibilities to oneself, to the family, to the society and to the Nation and help him to live a successful and meaningful life that inspires and guides the younger generation. E-learning is an abbreviation of the term electronic learning. Electronic learning in its literal meaning stands for the type of learning carried out, facilitated or supported by some or the other electronic gadgets, media or resources. Judging in this sense, the learning facilitated by the use of an electronic media or means like microphones and listening devices or audio and visual tapes can be termed as e-learning. In this sense, e-learning calls for the services of the advance electronic information and communication media and means like teleconferencing, video-conferencing and computer-based conferencing, e-mail, live chat, surfing on the Internet and Web browsing, online reference libraries, video games, customized e-learning courses etc.

Bhadoria (2016), in her study 'E-Learning – A boon for Indian Higher Education system' on the Sample from Universities of UP found that The use of e-learning is seen at all levels of educational system, and the positive effects of e-learning for the education system in India.

Gaikwad and Randhir (2005) in their study- E-Learning in India: Wheel of Change, on colleges of Pune Maharashtra found that - e- learning is an effective tool for development of educational sector in India. E-Learning is learning, utilizing electronic technologies to access educational curriculum outside of a traditional classroom.

Burke (2005) in his Dissertation 'The role of teaching learning media in teaching Biology in OBE classes' at the North West University (Potchefstroom campus) under the supervision of Prof N. J. Vreken found that it is important that the teacher uses more than just textbook. The impact of Visual aids is important, when combining pictorial and written analogies in the reading guide alone.

Siddiqui and Masud in their study 'AN E-Learning system for Quality education' Taif university in Kingdom of Saudi Arabia found that "E-Learning is the combination of the learning and the internet technology. Using E-Learning We can provide quality education to remote and rural regions with the help of modern technologies like satellite, internet and mobiles.

Allison Rosette (2001) defines eLearning as: Web-based training (WBT), also known as eLearning and on-line learning, is training that resides on a server or host computer that is connected to the World Wide Web.

A learning system based on formalized teaching but with the help of electronic

resources is known as E-learning. While teaching can be based in or out of the classrooms, the use of computers and the Internet forms the major component of E-learning. E-learning can also be termed as a network enabled transfer of skills and knowledge, and the delivery of education is made to a large number of recipients at the same or different times. Earlier, it was not accepted wholeheartedly as it was assumed that this system lacked the human element required in learning.

NEED AND SIGNIFICANCE OF THE STUDY:

E-learning provides individualized instructions suiting to the need, abilities, learning styles and interests of the learners. E-learning has much potential to make the education, instruction and learning opportunities provided to the learners adaptable to their need, local need and resources at their hands.

E-Learning, in comparison with traditional learning, significantly reduces the time needed to locate information. Blended learning is a combination of offline (face-to-face, traditional learning) and online learning in a way that the one complements the other. Collaborative learning is an e-learning approach where students are able to socially interact with other students, as well as instructors.

STATEMENT OF THE PROBLEM:

The study was done to check the level of attitude and awareness on the basis of gender board of the students and relationship among them, thus the topic was "Awareness and attitude towards use of e-learning resources in biology students among senior secondary schools of Patna."

OPERATIONAL DEFINITION:

Awareness:- Awareness is defined as help rendered to individuals to acquire a basic understanding of e-learning resources in biology and its associated problems by gaining variety of experiences. Here it measures the extent of knowledge and skills about e-learning resources in biology among senior secondary school students.

Attitude:- In this study attitude means positive or negative evaluation of people, object, events, activities used, concepts, or ideas just about anything in e-Learning resources in biology in senior secondary school students.

Senior Secondary Students:- Means students of standard XI and XII of Patna district.

E-learning resources:- In this study e-Learning resources are different electronic computer resources used for learning the school subjects (Biology) in this study.

OBJECTIVE OF THE STUDY:

- To find the significant differences in the mean scores of awareness on the use of E-Learning resources in biology between boys and girls of senior second-

ary schools.

- To find the significant differences in the mean scores of awareness on the use of e-Learning resources in biology between CBSE and ICSE boards senior secondary school students.
- To find the significant difference in the mean scores of attitudes of the use of e-Learning resources in biology between Boys and Girls of senior secondary school students.
- To find the significant difference in the mean scores of attitudes of the use of e-Learning resources in biology between CBSE and ICSE board senior secondary students.
- To find the significant relationship between awareness and attitude of use of e-Learning resources in biology among students of senior secondary school students.

TOOL USED:

As the study aims to find out awareness and attitude towards the use of e-learning resources in biology among higher secondary students. The investigator has used the following tool

- Awareness test on e-learning resources in biology (AOEB)
- Attitude scale on E-learning Resources in Biology (ATEB)

Awareness test on e-learning resources in biology was a MCQ type set of questionnaires, which is self-constructed and validated by the investigator.

To assess the attitude of senior secondary students towards e-learning resources investigator used self-made questionnaire. A self-constructed standardized Attitude scale on five Point Likert Scale was used.

METHOD USED:

In any investigation the method employed depends upon the nature of the problem selected and the kind of that are necessary for its solution. Since the problem selected for present study is concerned with 'survey type' the investigator has adopted the survey method to study the awareness and attitude towards e-learning resources in biology among senior secondary school student's.

Population:

The population of the study was senior secondary schools of Patna.

Sample:

The investigator collected data from 140 senior secondary school students of Patna. The data was collected from Don Bosco Academy, St. Xavier's High School, St. Michael's School and B. D. Public School. Two of them were CBSE Board schools and rest two were of ICSE board. The purposive sampling was adopted for selection of school in Patna. Simple random sampling was done for the selection of students studying biology at senior secondary level

STATISTICAL TECHNIQUES USED:

Depending upon the nature of the hypothesis and the data collected, the investigator used the following statistical techniques for analyzing and interpreting the data, using the MS Excel, SPSS software.

RESULTS:

H₀₁ There is no significant difference in the mean scores of awareness towards use of e-Learning resources in Biology between boys and girls of senior secondary students.

To test the above hypothesis t-test has been performed and the result is shown in given table-1

Table no 1: Mean, SD, and t value of Awareness towards use of e-learning resources in biology between boys and girls

	Gender	N	Mean	SD	df	P value	t-value
Awareness towards use of e-learning resources in biology between boys and girls	BOYS	72	14.01	3.667	138	0.659	.442
	GIRLS	68	14.28	3.429			

It is inferred from the above table no -1 that the mean value of girls (14.28) is greater than the mean value of boys (14.01). The calculated value of 't' is 0.442 and as observed the P value is 0.659 which is not acceptable at 5% level, to be called significant and hence suggests that the null hypothesis is accepted. It means there is no significant difference between awareness of students on use of e-learning resources in biology based on their gender.

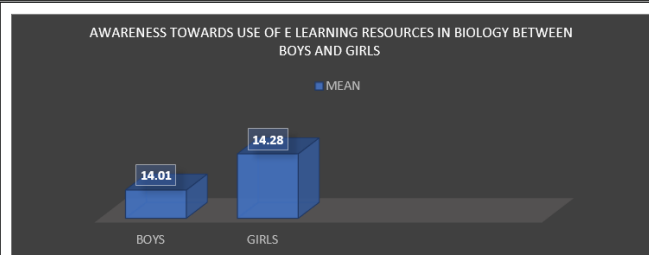


Figure 1: Mean gain score of comparison in Awareness towards use of e-learning resources in biology between boys and girls

H₀₂ There is no significant difference between mean scores of awareness in the use of e-learning resources in biology between CBSE and ICSE board senior secondary students

To test the above hypothesis the mean score, Standard Deviation, Degree of Freedom and 't' value has been calculated, which is mentioned in the given table 2.

Table 2: Mean, SD, and t value of Awareness towards use of e-learning resources in biology between CBSE and ICSE board students

	Board	N	Mean	SD	df	t-value	P value	Level of Significance
Awareness towards use of e-learning resources in biology between CBSE and ICSE board students	CBSE	78	14.27	3.574	138	.473	0.638	N S
	ICSE	62	13.98	3.527				

It is seen in the above table no 2 that the number of CBSE students was 78, and the number of ICSE students are 62. The mean value of CBSE students is 14.27 and SD is 3.574, while in other hand the mean value of ICSE students is 13.98 and SD is 3.527. The calculated value of 't' is 0.473 which is less than the critical value of 't' (1.98) at 5% level of significance. Hence, the null hypothesis is accepted. It means there is no significant difference between awareness of CBSE and ICSE students on use of e-learning resources in biology based on their boards of school.

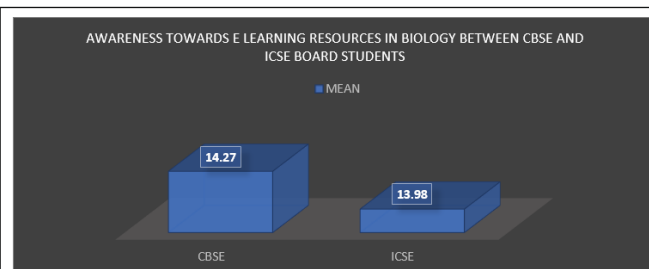


Figure 2: Mean score of comparison in Awareness towards use of e-learning resources in biology between CBSE and ICSE board students

H₀₃ There is no significant difference in the mean scores of attitudes towards the use of e-Learning resources in Biology between boys and girls of senior secondary school students.

To test this hypothesis t-test has been performed and the result is shown in given table- 3

Table 3: Mean, SD, and t value of in attitude towards use of e-Learning resources in biology between boys and girls

	Gender	N	Mean	SD	df	P- value	t-value
Attitude towards use of e-learning resources in biology between boys and girls	Male	72	74.38	12.505	138	.631	.482
	Female	68	75.46	13.999			

Although the mean score of girls (75.46) is higher than the mean score of boys (74.38). The obtained 't' value (0.482) when compared from the table value (1.98) at 5% level for 138 degrees of freedom is lower and Hence, the null hypothesis is accepted. It means there is no significant difference between attitude of students towards use of e-learning resources in biology based on their gender. This finding can be also observed in the figure 3.

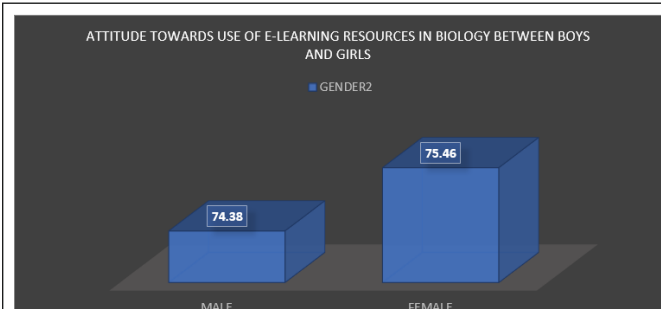


Figure 3: Mean score of comparison in attitude towards e-Learning resources in biology between boys and girls

H₀₄ There is no significance difference in the mean scores of attitudes towards use of e-learning resources in biology between CBSE and ICSE board senior secondary school students

To test this hypothesis t-test has been performed and the result is shown in given table- The number of students from CBSE is 78 and number of ICSE students are 62.

Table 4: Mean, SD, and t value of Attitude towards use of e-learning resources in biology between CBSE and ICSE board students

	Board	N	Mean	SD	df	P Value	t-value
Attitude towards use of e-learning resources in biology between CBSE and ICSE board students	CBSE	78	78.26	13.403	138	0.001	3.505
	ICSE	62	70.68	11.775			

Although the mean score of CBSE students (78.26) is higher than the mean score of ICSE students (70.68). The obtained 't' value (3.505) when compared from the table value (2.56) at 1% level of significance for 138 degrees of freedom is higher and hence, the null hypothesis is rejected. It means there is significant difference between attitude of students towards use of e-learning resources in biology based on their board of school. The comparison of mean scores as mentioned table could be better understood through the given picture. This finding can be also observed in the figure.

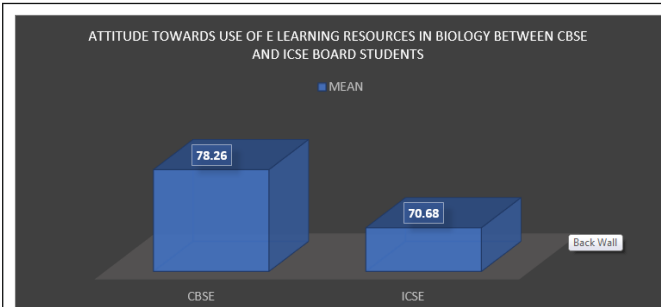


Figure 4: Mean score of comparison in attitude towards use of e-learning resources in biology between CBSE and ICSE board students

H₀₅ There is no significant correlation between awareness and attitude towards use of e-learning resources in biology among senior secondary school students. For the study of the above hypothesis the collected data has been analyzed by finding the correlation of coefficient and the results has been shown as follows.

Table 5: Results on Correlation Calculation

		Attitude towards e-learning	Awareness towards e-learning
Attitude towards e-learning	Pearson Correlation	1	.333**
	(sig- 2tailed)	140	.000
Awareness towards e-learning	Pearson Correlation	.333**	1
	(sig- 2tailed)	.000	140

** . Correlation is significant at the 0.01 level (2-tailed).

From the above table, it can be concluded that the calculated value of correlation is 0.333 which is more than the value of correlation at 0.01 level, therefore null hypothesis is rejected. Hence, there is significant relationship between awareness and attitude towards use of e-learning resources in biology among senior secondary school students

CONCLUSION:

It was found in the paper that there were no significant differences found between awareness and attitudes of male and female students towards use of e-learning resources in biology. It is a very ideal aspect that both the gender possesses similar awareness on the e-learning resources and also possess similar attitude towards the use of e-learning resources in biology. So in modern time we have been successful in attaining gender equality at least when we talk about higher secondary education and science learning. It has been found that there also exists significant relationship in between the awareness as well as the attitude towards use of e-learning resources in biology which is also a very positive sign for all of us. Today in the era where technology is a vital aid to support students learning. The recent era of pandemic has also made e-learning resources very much important to be used for teaching and learning. It is essential that we teach the 21st century digital natives using technological resources as much as possible. The use of technology in terms of e-learning resources, digital platforms make learning more productive, interesting and make the students active learners.

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